

OUTDOOR LIGHTING ACCEPTANCE TESTS

CEC-NRCA-LTO-02-A (Revised 01/19)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF ACCEPTANCE		NRCA-LTO-02-A
Outdoor Lighting Control Acceptance Document		(Page 1 of 4)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

Compliance Results: [COMPLIES or DOES NOT COMPLY]	Enforcement Agency Use: Checked by/Date
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Intent:	This document is used to demonstrate compliance with acceptance requirements in §130.4(a)6 and Reference Nonresidential Appendix NA7.8 for outdoor lighting controls. Attach additional sets of pages 1 through 3, as required, for all controls that must be tested.
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Indicate all types of outdoor lighting controls tested for this project:	
<input type="checkbox"/>	Motion sensors (excluding motion sensors used in conjunction with automatic scheduling controls) (Sections A-1 and B-1 of this document should be completed)
<input type="checkbox"/>	Photo controls (Sections A-2 and B-2 of this document should be completed)
<input type="checkbox"/>	Astronomical time switch controls (Sections A-3 and B-3 of this document should be completed)
<input type="checkbox"/>	Automatic scheduling controls (excluding automatic scheduling controls used in conjunction with motion sensors) (Sections A-4 and B-4 of this document should be completed)
<input type="checkbox"/>	Automatic scheduling controls and motion sensors used in conjunction (Sections A-5 and B-5 of this document should be completed)

Motion Sensors			
Building:	Floor:	Room:	Control:
<input type="checkbox"/>	Sensor is representative of sample. (NA7.8.2) If sampling method is used, attach a page listing untested sensors in sample.		
A-1. Motion Sensor Construction Inspection (NA7.8.1)			
<input type="checkbox"/>	a.	The sensor has been located to minimize false signals. (NA7.8.1(a))	
<input type="checkbox"/>	b.	The sensor is not triggered by motion outside of controlled area. (NA7.8.1(b))	
<input type="checkbox"/>	c.	The desired sensor coverage is not blocked by obstructions that could adversely affect performance. (NA7.8.1(c))	
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			
B-1. Motion Sensor Functional Testing (NA7.8.2)			
Confirm compliance (Y - yes / N - no) for the control being tested.			
Step 1: Simulate motion in the area with lighting controlled by the sensor. (NA7.8.2, Step 1)			
<input type="checkbox"/>	a.	The status indicator operates correctly. (NA7.8.2, Step 1(a) , §110.9(b)4C)	
<input type="checkbox"/>	b.	The controlled lighting turns on immediately upon entry into the controlled area. (NA7.8.2, Step 1(b) , §130.2(c)3B)	
<input type="checkbox"/>	c.	The signal sensitivity is adequate to achieve desired control. (NA7.8.2, Step 1(c))	
Step 2: Simulate no motion in the area with lighting controlled by the sensor. (NA7.8.2, Step 2)			
<input type="checkbox"/>	d.	The light output of the controlled luminaires is reduced within 15 minutes from the start of an unoccupied condition. (NA7.8.2, Step 2(a) , §130.2(c)3B)	
<input type="checkbox"/>	e.	The sensor does not trigger a false "on" from movement outside of the controlled area. (NA7.8.2, Step 2(b))	
<input type="checkbox"/>	f.	The signal sensitivity is adequate to achieve desired control. (NA7.8.2, Step 2(c))	
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			

Photo Controls			
Building:	Floor:	Room:	Control:
A-2. Photo Control Construction Inspection (NA7.8.3)			
<input type="checkbox"/>	a.	The photo control is installed. (NA7.8.3)	
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			
B-2. Photo Control Functional Testing (NA7.8.4)			
Confirm compliance (Y - yes / N - no) for the control being tested.			
<input type="checkbox"/>	a.	During daytime simulation, all controlled outdoor lighting is turned off. (NA7.8.4(a) , §130.2(c)1)	
<input type="checkbox"/>	b.	During nighttime simulation, all controlled outdoor lighting is turned on. (NA7.8.4(b))	
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply			

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Astronomical Time Switch Controls		
Building:	Floor:	Room:
Control:		
A-3. Astronomical Time Switch Control Construction Inspection (NA7.8.5)		
<input type="checkbox"/>	a.	The astronomical time switch control is installed. (NA7.8.5(a))
<input type="checkbox"/>	b.	The astronomical time switch control is programmed with ON and OFF schedules that match the schedules in the construction documents. OR If the schedule is unknown, the programmed schedule matches the default schedule where the OFF schedule is from 12:00 A.M. to 6:00 A.M. and the ON schedule is all other night time hours, 7 days per week. (NA7.8.5(b))
<input type="checkbox"/>	c.	Demonstrate and document the lighting control programming including ON and OFF schedules for weekdays, weekends, and holidays (if applicable). (NA7.8.5(c))
<input type="checkbox"/>	d.	The correct time and date are properly set in the control. (NA7.8.5(d))
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		
B-3. Astronomical Time Switch Control Functional Testing (NA7.8.6)		
Confirm compliance (Y - yes / N - no) for the control being tested.		
a.	During daytime simulation, all controlled outdoor lighting is turned off. (NA7.8.6(a), §130.2(c)1)	
b.	During nighttime simulation, all controlled outdoor lighting is turned on in accordance with the astronomical schedule. (NA7.8.6(b))	
c.	During nighttime simulation, the power of controlled outdoor lights is turned off or reduced by at least 50% in accordance with the programmed schedule. (NA7.8.6(c))	
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		

Automatic Scheduling Controls		
Building:	Floor:	Room:
Control:		
A-4. Automatic Scheduling Control Construction Inspection (NA7.8.7)		
<input type="checkbox"/>	a.	The automatic scheduling control is installed. (NA7.8.7(a))
<input type="checkbox"/>	b.	The automatic scheduling control is programmed with ON and OFF schedules that match the schedules in the construction documents. OR If the schedule is unknown, the programmed schedule matches the default schedule where the OFF schedule is from 12:00 A.M. to 6:00 A.M. and the ON schedule is all other night time hours, 7 days per week. (NA7.8.7(b))
<input type="checkbox"/>	c.	Demonstrate and document the lighting control programming including ON and OFF schedules for weekdays, weekends, and holidays (if applicable). (NA7.8.7(c))
<input type="checkbox"/>	d.	The correct time and date are properly set in the control. (NA7.8.7(d))
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		
B-4. Automatic Scheduling Control Functional Testing (NA7.8.8)		
Confirm compliance (Y - yes / N - no) for the control being tested.		
a.	During daytime simulation, all controlled outdoor lighting is turned off. (NA7.8.8(a), §130.2(c)1)	
b.	During nighttime simulation, all controlled outdoor lighting is turned on in accordance with the programmed schedule. (NA7.8.8(b))	
c.	During nighttime simulation, the power of controlled outdoor lights is turned off or reduced by at least 50% in accordance with the programmed schedule. (NA7.8.8(c))	
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		

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Automatic Scheduling Controls and Motion Sensors Used in Conjunction		
Building:	Floor:	Room:
Controls:		
A-5. Automatic Scheduling Control and Motion Sensor Construction Inspection (NA7.8.7)		
<input type="checkbox"/>	a.	The automatic scheduling control is installed. (NA7.8.7(a))
<input type="checkbox"/>	b.	The automatic scheduling control is programmed with ON and OFF schedules that match the schedules in the construction documents. OR If the schedule is unknown, the programmed schedule matches the default schedule where the OFF schedule is from 12:00 A.M. to 6:00 A.M. and the ON schedule is all other night time hours, 7 days per week. (NA7.8.7(b))
<input type="checkbox"/>	c.	Demonstrate and document the lighting control programming including ON and OFF schedules for weekdays, weekends, and holidays (if applicable). (NA7.8.7(c))
<input type="checkbox"/>	d.	The correct time and date are properly set in the control. (NA7.8.7(d))
<input type="checkbox"/>	e.	The motion sensor has been located to minimize false signals. (NA7.8.7(a))
<input type="checkbox"/>	f.	The motion sensor is not triggered by motion outside of controlled area. (NA7.8.7(b))
<input type="checkbox"/>	g.	The desired motion sensor coverage is not blocked by obstructions that could adversely affect performance. (NA7.8.7(c))
Construction Inspection Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		
B-5. Automatic Scheduling Control and Motion Sensor Functional Testing (NA7.8.8)		
Confirm compliance (Y - yes / N - no) for the control being tested.		
Step 1: Daytime simulation		
a.	During daytime simulation, all controlled outdoor lighting is turned off. (NA7.8.8(a), §130.2(c)1)	
Step 2: Simulate motion in the controlled area. (NA7.8.8(b))		
b.	The status indicator operates correctly. (NA7.8.8(b)i)	
c.	The controlled lighting turns on immediately upon entry into the controlled area. (NA7.8.8(b)ii)	
d.	The signal sensitivity is adequate to achieve desired control. (NA7.8.8(b)iii)	
Step 3: During simulation of the normally occupied schedule, simulate no occupancy in the controlled area. (NA7.8.8(c))		
e.	The power of controlled lighting is reduced by at least 50% within 15 minutes from the start of an unoccupied condition. Fraction of light output reduction is an acceptable proxy for reduction in lighting power. (NA7.8.8(c)i)	
f.	The signal sensitivity is adequate to achieve the desired control. (NA7.8.8(c)ii)	
Step 4: During simulation of the normally unoccupied schedule, simulate no occupancy in the controlled area. (NA7.8.8(d))		
g.	The power of controlled lighting is reduced by at least 50% within 15 minutes from the start of an unoccupied condition. Fraction of light output reduction is an acceptable proxy for reduction in lighting power. (NA7.8.8(d)i)	
h.	The signal sensitivity is adequate to achieve the desired control. (NA7.8.8(d)ii)	
Functional Testing Compliance: <input type="radio"/> Complies <input type="radio"/> Does Not Comply		

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
I certify that this Certificate of Acceptance documentation is accurate and complete.		
Documentation Author Name:	Documentation Author Signature:	
Documentation Author Company Name:	Date Signed:	
Address:	CEA/ATT Certification Identification (If applicable):	
City/State/Zip:	Phone:	
FIELD TECHNICIAN'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building. 		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	Date Signed:
RESPONSIBLE PERSON'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I will ensure that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Person Name:	Responsible Person Signature:	
Responsible Person Company Name:	Position with Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed: